

## 10.0 AOC 13/14 – DOG KENNEL AREA AND REACTION AREA T-5

### 10.1 LOCATION OF STUDY AREA

Reaction Area T-5 comprises approximately 11.9 acres within the Cantonment Area at the Fort McClellan, Alabama Army Installation and includes the 0.14 acre Dog Kennel Area (Fig. 1). The study area boundary was devised by adding a 50-ft buffer outside of the Reaction Area T-5 site boundary.

### 10.2 AERIAL PHOTOGRAPH QUALITY ISSUES

A few photograph quality issues were encountered during photograph interpretation. They were corrected as follows:

- X     Quality** - In many areas of the photographs, the dynamic range of brightness values was insufficient to distinguish land cover classes. Due to extreme brightness (almost white), ground cover such as grass, bare soil, trails, and roads could not be differentiated. At other locations, extremely dark (nearly black) areas made it difficult to delineate grass from forested areas. Where appropriate, the problem areas of the photographs were subset and image enhancement techniques were applied. Simple adjustments to the brightness and contrast were conducted, or in more severe cases, a histogram equalization in the range of the lookup table was performed on the specific area where interpretation was difficult. Photographic interpretation could not be conducted on the 1937 photographs due to the poor quality of the photographs.
  
- X     Rectification** - Although second- and third-order transformations were used in the rectification of the digital photographs, several rectified photographs contained too much error within Reaction Area T-5 to accurately digitize land use/cover polygons. Factors contributing to the error included: (1) insufficient ground control points (GCPs) due to pronounced changes in land cover between years, (2) photographic distortion (location of the site in relation to the center of the photograph and the angle of the camera/aircraft when the photograph was acquired), and (3) terrain distortion (a single photograph may cover a large geographic area of varying elevations even though the site of interest may have little topographic relief). To improve the photographic registration of the study area, Reaction Area T-5 was subset from the rectified digital photographs in question and the newly-created image files were rectified separately.

### 10.3 FINDINGS

Complete photographic coverage of the study area was available for eight years of photographic coverage from 1937 to 1994. A total of 221 anomalies were identified in the year-by-year land cover analysis (Fig. 2). All anomalies were inspected to ascertain the cause of each anomaly. All but three anomalies were resolved. Anomalies which were not resolved and anomalies potentially associated with waste disposal or chemical training activities were determined to be of potential concern and should be assessed by the USAESCH. During the final quality assurance review of the land use/cover anomalies, two anomalies were determined to be photographic interpretation errors. The two anomalies are identified as “QA” in Table 1 and will not be discussed further. Of the remaining 219

anomalies identified, 175 were caused by new, pre-existing or former roads, pre-existing and former trails, new trails associated with building construction, new buildings, removal of buildings, pre-existing unidentified objects, the clearing of trees, and other cleared areas associated with the construction of a building complex. The remaining forty-four anomalies were the result of new trails, unidentified objects, and the clearing of trees and/or groundcover; these anomalies are considered to be of potential concern.

**1937.** The 1937 photographs were not interpreted because of the poor quality of the available photographs (see Fig. 3a). However, no pre-existing anomalous areas were identified during a visual inspection of the photographs.

**1937 to 1940.** Since the 1937 photographs were not interpreted, the 1937 land use/cover was not available. However, two anomalies were identified during the land cover analysis for 1940 (see Table 1 and Fig. 3b). The two anomalies were the result of new roads and are not of potential concern.

**1940 to 1944.** Sixty-five anomalies were identified during the land cover analysis for the years 1940 and 1944 (see Table 1 and Fig. 3c). Fifty-four anomalies were the result of new buildings; new, pre-existing, and former roads and trails; and the clearing of trees and/or vegetation associated with the construction of a building complex. The remaining eleven anomalies are of potential concern and were the result of the clearing of trees (6 anomalies), new trails (3 anomalies), and cleared areas (2 anomalies).

**1944 to 1954.** Seventy-one anomalies were identified during the land cover change analysis for the years 1944 and 1954 (see Table 1 and Fig. 3d). Sixty-six of the anomalies were the result of the removal of buildings, former cleared areas, former trails, and new, pre-existing, and former roads. The remaining five anomalies are of potential concern and were the result of cleared areas (3 anomalies) and the clearing of trees (2 anomalies).

**1954 to 1961.** Three anomalies were identified during the land cover change analysis for the years 1954 and 1961 (see Table 1 and Fig. 3e). One anomaly was the result of a pre-existing road. The remaining two anomalies are of potential concern and were the result of the clearing of trees (1 anomaly) and another cleared area (1 anomaly).

**1961 to 1969.** Forty-three anomalies were identified during the land cover change analysis for the years 1961 and 1969 (see Table 1 and Fig. 3f). Twenty-seven of the anomalies were the result of new, pre-existing, and former roads and pre-existing and former cleared areas. The remaining sixteen anomalies are of potential concern and were the result of cleared areas (6 anomalies), new trails (4 anomalies), unidentified objects (3 anomalies), and the clearing of trees (3 anomalies).

**1969 to 1982.** Fourteen anomalies were identified during the land cover change analysis for the years 1969 and 1982 (see Table 1 and Fig. 3g). Nine anomalies were the result of pre-existing unidentified objects, pre-existing and former roads and trails, and pre-existing and former cleared areas. The remaining five anomalies are of potential concern and were the result of the clearing of trees (4 anomalies) and another cleared area (1 anomaly).

**1982 to 1994.** Twenty-one anomalies were identified during the land cover change analysis for the years 1982 and 1994 (see Table 1 and Fig. 3h). Fifteen anomalies were the result of new buildings, pre-existing unidentified objects, pre-existing and former cleared areas, and the clearing trees and other vegetation associated with building construction. The remaining six anomalies are of potential concern and were the result of cleared areas (4 anomalies) and the clearing of trees (2 anomalies).

Figure 1



Figure 2



**Table 1. Reaction Area T-5 - Anomaly Resolution**

Of Potential Concern?	Anomaly #	Year of Change	Discussion	Related Anomalies <sup>1</sup>
	1	1940	Road	4, 16-21, 25, 33, 47, 53, 57, 60
	2	1940	Road	63, 64, 66
Yes	3	1944	Trees cleared (may be associated with construction of adjacent building complex)	5
	4	1944	Former road; overgrown (only visible 1940)	1
Yes	5	1944	Trees cleared (may be associated with construction of adjacent building complex)	3
	6	1944	Trees cleared (associated with construction of adjacent building complex)	None
	7	1944	Road	68, 76-81
	8	1944	Cleared area (associated with new building complex)	71
	9	1944	Building	69, 70, 72, 73
	10	1944	Building	74
	11	1944	Building	75
	12	1944	Cleared area (associated with new building complex)	93
	13	1944	Building	89-92
	14	1944	Building	85, 86, 138
	15	1944	Building	82, 83
	16	1944	Former road (first visible 1940)	1
	17	1944	Former road (first visible 1940)	1
	18	1944	Former road (first visible 1940)	1
	19	1944	Former road (first visible 1940); part of new road	1, 27, 102, 141, 201
	20	1944	Former road (first visible 1940)	1
	21	1944	Former road (first visible 1940)	1
	22	1944	Trees cleared (associated with construction of adjacent building complex)	68
	23	1944	Trees cleared (associated with construction of adjacent building complex)	
	24	1944	Trail (associated with new building complex)	104, 110
	25	1944	Former road (first visible 1940); part of new trail (associated with new building complex)	1, 104
	26	1944	Trail (associated with new building complex)	103

Of Potential Concern?	Anomaly #	Year of Change	Discussion	Related Anomalies <sup>1</sup>
	27	1944	Road (associated with new building complex)	19, 53, 68, 102, 103, 105, 115-117, 141, 201
	28	1944	Building	111
	29	1944	Building	114
	30	1944	Building	113
	31	1944	Building	112
	32	1944	Trail (associated with new building complex)	109, 116, 118
	33	1944	Former road (first visible 1940)	1
	34	1944	Building	94, 95, 101
	35	1944	Building	96
	36	1944	Building	97
	37	1944	Building	98
	38	1944	Building	99
	39	1944	Building	100
	40	1944	Building	124, 125
	41	1944	Building	126
	42	1944	Building	127
	43	1944	Building	128
	44	1944	Building	129
	45	1944	Building	130
	46	1944	Building	106, 107
	47	1944	Building; former road (first visible 1940)	1, 105, 107
	48	1944	Building	50, 105
	49	1944	Former road (first visible 1940)	108
	50	1944	Building	48, 105
	51	1944	Former road (first visible 1940)	115
	52	1944	Trees cleared (associated with construction of adjacent building complex)	115
	53	1944	Former road (first visible 1940); part of new road	1, 27, 102
	54	1944	Building	120-123



<b>Of Potential Concern?</b>	<b>Anomaly #</b>	<b>Year of Change</b>	<b>Discussion</b>	<b>Related Anomalies<sup>1</sup></b>
Yes	55	1944	Trees cleared	None
Yes	56	1944	Trail or road	132
Yes	57	1944	Trail or road	132
Yes	58	1944	Trail or road	132
Yes	59	1944	Trees cleared	None
	60	1944	Former road (first visible 1940)	1
Yes	61	1944	Trees cleared	65, 67
Yes	62	1944	Cleared area	133
	63	1944	Former road (first visible 1940)	2
	64	1944	Former road (first visible 1940)	2
Yes	65	1944	Trees cleared	61
	66	1944	Former road (first visible 1940)	2
Yes	67	1944	Cleared area	61
	68	1954	Pre-existing road widened (first visible 1944)	7, 22, 27, 103, 105, 115-117, 141, 143, 145, 169, 173, 174
	69	1954	Building removed (only visible 1944)	9, 70, 72, 73
	70	1954	New road; building removed	9, 69, 71-73, 141, 147, 148
	71	1954	Road	8, 70, 141, 147, 148
	72	1954	Building removed (only visible 1944)	9, 69, 70, 72, 73
	73	1954	Building removed (only visible 1944)	9, 69, 70, 72
	74	1954	Building removed (only visible 1944)	10
	75	1954	Building removed (only visible 1944)	11
	76	1954	Pre-existing road (only visible 1944)	7, 141, 157
	77	1954	Former road (only visible 1944)	7
	78	1954	Former road (only visible 1944)	7
	79	1954	Former road (only visible 1944)	7
	80	1954	Former road (only visible 1944)	7
	81	1954	Former road (only visible 1944)	7
	82	1954	Building removed (only visible 1944)	15

Of Potential Concern?	Anomaly #	Year of Change	Discussion	Related Anomalies <sup>1</sup>
	83	1954	Building removed (only visible 1944)	15
	84	1954	Trees cleared (associated with building demolition)	86
	85	1954	Building removed (only visible 1944)	14, 86, 138
	86	1954	Building removed (only visible 1944)	14, 84, 85, 87, 88, 138
	87	1954	Trees cleared (associated with building demolition)	86
	88	1954	Trees cleared (associated with building demolition)	86
	89	1954	Building removed (only visible 1944)	13, 90-92
	90	1954	Building removed (only visible 1944)	13, 89, 91, 92
	91	1954	New road, building removed (only visible 1944)	13, 89, 90, 92, 141, 161
	92	1954	Building removed (only visible 1944)	13, 89-91
	93	1954	New road	12, 141, 157, 162, 165
	94	1954	Building removed (only visible 1944)	34, 95, 101
	95	1954	Building removed (only visible 1944)	34, 94, 101
	96	1954	Building removed (only visible 1944)	35
	97	1954	Building removed (only visible 1944)	36
	98	1954	Building removed (only visible 1944)	37
	99	1954	Building removed (only visible 1944)	38
	100	1954	Building removed (only visible 1944)	39
	101	1954	Building removed (only visible 1944)	34, 94, 95
	102	1954	Pre-existing road (only visible 1944)	19, 27, 53, 141, 168, 190, 201
	103	1954	Pre-existing road widened (only visible 1944)	26, 27, 68, 141, 173
	104	1954	Former trail (only visible 1944)	24, 25
	105	1954	Pre-existing road widened (only visible 1944); building removed (only visible 1944)	27, 47, 48, 50, 68, 141, 173
	106	1954	Building removed (only visible 1944)	46
	107	1954	Building removed (only visible 1944)	46, 47
Yes	108	1954	Cleared area	49
	109	1954	Former trail (only visible 1944)	32

Of Potential Concern?	Anomaly #	Year of Change	Discussion	Related Anomalies <sup>1</sup>
	110	1954	Former trail (only visible 1944)	24
	111	1954	Building removed (only visible 1944)	28
	112	1954	Building removed (only visible 1944)	31
	113	1954	Building removed (only visible 1944)	30
	114	1954	Building removed (only visible 1944)	29
	115	1954	Pre-existing road widened (only visible 1944)	27, 51, 52, 68, 141, 173
	116	1954	Pre-existing road widened (only visible 1944)	27, 32, 68, 141, 173
	117	1954	Pre-existing road widened (only visible 1944)	27, 68, 141, 173, 174
Yes	118	1954	Cleared area; part of former trail (only visible 1944)	32
Yes	119	1954	Cleared area	
	120	1954	Building removed (only visible 1944)	54, 121-123
	121	1954	Building removed (only visible 1944)	54, 120, 122, 123
	122	1954	Building removed (only visible 1944)	54, 120, 121, 123
	123	1954	Building removed (only visible 1944)	54, 120-122
	124	1954	Building removed (only visible 1944)	40, 125
	125	1954	Building removed (only visible 1944)	40, 124
	126	1954	Building removed (only visible 1944)	41
	127	1954	Building removed (only visible 1944)	42
	128	1954	Building removed (only visible 1944)	43
	129	1954	Building removed (only visible 1944)	44
	130	1954	Building removed (only visible 1944)	45
	131	1954	Road	141, 177, 191
	132	1954	Former road (only visible 1944)	56-58
	133	1954	Former cleared area (only visible 1944)	62
	134	1954	Road	141, 177, 186, 191
Yes	135	1954	Trees cleared	None
	136	1954	Road	141, 168, 178, 181-184, 190, 201
Yes	137	1954	Trees cleared	None

Of Potential Concern?	Anomaly #	Year of Change	Discussion	Related Anomalies <sup>1</sup>
	138	1954	Building removed (only visible 1944)	14, 85, 86
Yes	139	1961	Trees cleared	144
Yes	140	1961	Cleared area	149, 150, 151, 152, 153, 154, 193, 194, 195, 203, 204, 205, 206
	141	1961	Pre-existing road (partially visible 1944, partially visible 1954)	19, 27, 68, 70, 71, 76, 91, 93, 102, 103, 105, 115-117, 134, 136, 143, 161, 162, 165, 169, 173, 177, 178, 181-184, 186, 190, 191, 201
	142	1961	QA	
	143	1969	Former road (first visible 1954)	68, 141
	144	1969	Former cleared area (first visible 1961)	139
Yes	145	1969	Cleared area; former road (first visible 1954)	68
Yes	146	1969	Cleared area	None
	147	1969	Former road (first visible 1954)	70, 71
	148	1969	Former road (first visible 1954)	70, 71
	149	1969	Former cleared area (first visible 1961)	140
	150	1969	Pre-existing cleared area (first visible 1961)	140, 193-195, 202-206
	151	1969	Pre-existing cleared area (first visible 1961)	140
	152	1969	Road	140
	153	1969	Former cleared area (first visible 1961)	140
	154	1969	Former cleared area (first visible 1961)	140
Yes	155	1969	Trees cleared	None
Yes	156	1969	Trees cleared	None
	157	1969	Former road (first visible 1954)	76, 93, 141
Yes	158	1969	Unidentified (building-like shape, height cannot be discerned from stereo viewing)	159, 160, 199, 211
Yes	159	1969	Unidentified (building-like shape, height cannot be discerned from stereo viewing)	158, 160, 199, 211
Yes	160	1969	Unidentified (building-like shape, height cannot be discerned from stereo viewing)	158, 159, 199, 211
	161	1969	Former road (first visible 1954)	91, 141

<b>Of Potential Concern?</b>	<b>Anomaly #</b>	<b>Year of Change</b>	<b>Discussion</b>	<b>Related Anomalies<sup>1</sup></b>
	162	1969	Former road (first visible 1954)	93, 141
Yes	163	1969	Trees cleared	210
Yes	164	1969	Trees cleared	166
	165	1969	Former road (first visible 1954)	93, 141
Yes	166	1969	Trees cleared	164
	167	1969	New road	187
	168	1969	Pre-existing road (partially visible 1944, partially visible 1954)	102, 136, 141, 190, 201
	169	1969	Former road (first visible 1954)	68, 141
Yes	170	1969	Trail	181, 188, 189, 191, 202
Yes	171	1969	Trees cleared	172
Yes	172	1969	Cleared area	171
	173	1969	Former road (first visible 1954)	68, 103, 105, 115-117, 141
	174	1969	Former road (first visible 1954)	68, 117
Yes	175	1969	Trail	191
Yes	176	1969	Trail	191
	177	1969	Trail; former road (first visible 1954)	134, 141, 191
	178	1969	Former road (first visible 1954)	136, 141
	179	1969	Road	190, 201
	180	1969	QA	
	181	1969	Trail; former road (first visible 1954)	136, 141, 170, 189, 202
	182	1969	Former road (first visible 1954)	136, 141
	183	1969	Trail; former road ( first visible 1954)	136, 141, 191
	184	1969	Former road (first visible 1954)	136, 141
Yes	185	1969	Trail	191
	186	1969	Former road (first visible 1954)	134, 141
	187	1982	Former road (first visible 1969)	167
	188	1982	Former trail (first visible 1969)	170
	189	1982	Pre-existing trail (first visible 1969)	170, 181, 202

Of Potential Concern?	Anomaly #	Year of Change	Discussion	Related Anomalies <sup>1</sup>
	190	1982	Pre-existing road (partially visible 944, partially visible 1954)	102, 136, 141, 168, 179, 201
	191	1982	Former trail (first visible 1969)	134, 141, 170, 175-177, 183, 185
Yes	192	1982	Trees cleared	None
	193	1982	Former cleared area (first visible 1961)	140, 150, 203
	194	1982	Former cleared area (first visible 1961)	140, 150, 204
	195	1982	Pre-existing cleared area (first visible 1961)	140, 150, 205, 206
Yes	196	1982	Trees cleared	None
Yes	197	1982	Trees cleared	219
Yes	198	1982	Cleared area	212
	199	1982	Pre-existing unidentified object (first visible 1969)	158-160, 211
Yes	200	1982	Trees cleared	214
	201	1994	Pre-existing road (partially visible 1944, partially visible 1954)	19, 27, 102, 136, 141, 168, 179 190
	202	1994	Former trail (first visible 1969)	170, 181, 189
Yes	203	1994	Trees cleared	140, 150, 193
Yes	204	1994	Cleared area	140, 150, 194
	205	1994	Pre-existing cleared area (first visible 1961)	140, 150, 195
	206	1994	Former cleared area (first visible 1961)	140, 150, 195
Yes	207	1994	Trees cleared	None
Yes	208	1994	Cleared area	None
Yes	209	1994	Cleared area	None
Yes	210	1994	Cleared area	163
	211	1994	Pre-existing unidentified object (first visible 1969)	158-160, 199
	212	1994	Pre-existing cleared area (first visible 1969)	198
	213	1994	Cleared area (associated with building construction)	
	214	1994	Cleared area (associated with building construction)	200
	215	1994	Building	216-218
	216	1994	Building	215, 217, 218
	217	1994	Building	215, 216, 218

<b>Of Potential Concern?</b>	<b>Anomaly #</b>	<b>Year of Change</b>	<b>Discussion</b>	<b>Related Anomalies<sup>1</sup></b>
	218	1994	Building	215-217
	219	1994	Cleared area (associated with building construction)	197
	220	1994	Trees cleared (associated with building construction)	None
	221	1994	Trees cleared (associated with building construction)	None

<sup>1</sup> Related anomalies refer to anomalies which are carried forward from year to year (e.g., a trail) or anomalies which change (e.g., the extension or widening of a trail or cleared area).

#### **10.4 ANOMALIES OF POTENTIAL CONCERN**

Two hundred twenty anomalies were identified during the photographic interpretation of Reaction Area T-5. All anomalies have been resolved except for three unidentified objects. Forty-four anomalies are considered to be of potential concern. To facilitate anomaly tracking, the anomalies of potential concern were mapped using the anomaly tracking number assigned in the year-by-year analysis (see Table 2 and Fig. 4). Table 2 provides information for each anomaly of potential concern, including the anomaly tracking number, coordinates for the approximate center of the anomaly (coordinates provided in Alabama State Plane East, North American Datum [NAD] 83), the year the change occurred, and the reason for the anomaly.

**THIS PAGE INTENTIONALLY LEFT BLANK**



Fig. 3a



Fig. 3b



Fig. 3c



Fig. 3d





Fig. 3e



Fig. 3f



Fig. 3g



Fig. 3h





**Table 2. Reaction Area T-5 - Anomalies of Concern**

Anomaly #	Alabama State Plane Coordinates (approximate anomaly center)		Year of Change	Discussion
	X-Coordinate	Y-Coordinate		
3	668139.01845	1165567.09283	1944	Trees were cleared from this area prior to 1944. The clearing may be associated with construction of adjacent building complex. By 1954, vegetation regrowth was underway.
5	668203.49039	1165589.44723	1944	Trees were cleared from this area prior to 1944. The clearing may be associated with construction of adjacent building complex. By 1954, vegetation regrowth was underway.
55	668443.30727	1165187.56660	1944	Trees were cleared from the area prior to 1944. The area was adjacent to building construction activity and the area may have been used for construction activities. However, in portions of the area all ground cover was removed. By 1954, vegetation regrowth was underway.
56	668605.37102	1165182.88267	1944	A trail (or road) is evident in the 1944 photographs. By 1954, the trail had become overgrown.
57	668612.86530	1165187.56660	1944	A trail (or road) is evident in the 1944 photographs. By 1954, the trail had become overgrown.
58	668638.15849	1165219.41728	1944	A trail (or road) is evident in the 1944 photographs. By 1954, the trail had become overgrown.
59	668647.52634	1165189.44017	1944	Trees were cleared from this area prior to the acquisition of the 1944 photographs. By 1954, the area had revegetated.
61	668604.76665	1165132.39451	1944	Trees were cleared from this area prior to the acquisition of the 1944 photographs. By 1954, the area had revegetated.
62	668648.23648	1165033.03490	1944	This area was cleared prior to 1944. By 1954, the area had revegetated.
65	668674.76820	1164941.19891	1944	Trees were cleared from this area prior to 1944. By 1954, the area had revegetated.
67	668680.24525	1164964.44825	1944	This area was cleared prior to 1944. By 1954, the area had revegetated.
108	668308.19054	1165206.27730	1954	This area was cleared between 1944 and 1954. The cleared area may be associated with the demolition of buildings within the study area. In 1961, the area had slowly begun to revegetate. The reforestation of the site cannot be seen in historical photographs until 1994.
118	668316.65978	1165174.16869	1954	This area was part of a trail which was evident in the 1944 photographs. The area was cleared between 1944 and 1954. The cleared area may be associated with the demolition of buildings within the study area. By 1961, the area had revegetated.

Anomaly #	Alabama State Plane Coordinates (approximate anomaly center)		Year of Change	Discussion
	X-Coordinate	Y-Coordinate		
119	668357.40184	1165243.51419	1954	This area was cleared between 1944 and 1954. The area remained cleared throughout each year of available historic aerial photography, including the photographs acquired in 1994.
135	668408.11741	1164823.96571	1954	Trees were cleared in this area between 1944 and 1954. A road was established next to this area during the same time period. The clearing of trees may be related to the construction of the road. By 1961, the area had become revegetated.
137	668379.13752	1164813.61575	1954	Trees were cleared in this area between 1944 and 1954. A road was established next to this area during the same time period. The clearing of trees may be related to the construction of the road. By 1961, the area had become revegetated.
139	668328.55719	1165577.55611	1961	Trees were cleared in this area between 1954 and 1961. By 1969, vegetation regrowth was underway and by 1982, the area had become reforested.
140	668575.11288	1165551.09647	1961	This area was cleared between 1954 and 1961. Most of the area remained clear in 1969. By 1982, most of the area was becoming revegetated. A small area in the northeastern portion of the anomaly remained clear. In 1994, trees were removed from a portion of this anomalous area (anomaly of potential concern 203) and another portion of the area was cleared (anomaly of potential concern 204).
145	668343.34328	1165567.37991	1969	This area was cleared between 1961 and 1969. The area was part of a road which was first evident in photographs acquired in 1954. By 1982, the area had become reforested.
146	668364.55692	1165559.13016	1969	This area was cleared between 1961 and 1969. The anomaly is along a pre-existing road and may be associated with road widening activities. By 1994, the area had become reforested.
155	668479.46414	1165512.57800	1969	Trees were cleared in this area prior to the acquisition of the 1969 photographs. Additional tree clearing occurred in this area in 1982 (see anomaly of potential concern 197). By 1994, the area had reforested.
156	668447.64368	1165510.81020	1969	This area was cleared between 1961 and 1969. The anomaly is along a pre-existing road. By 1982, vegetation regrowth was underway.
158 (includes anomalies 159 and 160)	668472.98219	1165477.81120	1969	This unidentified anomaly is shaped like a building. During the photographic interpretation, analysts viewed the 1969 photographs through a stereo scope, but could not discern the approximate height of the object. The object is present in photographs acquired in 1982 and 1994. This anomaly may be associated with activities in the Dog Kennel Area (within Reaction Area T-5).

Anomaly #	Alabama State Plane Coordinates (approximate anomaly center)		Year of Change	Discussion
	X-Coordinate	Y-Coordinate		
163	668368.68179	1165525.54189	1969	This area was cleared between 1961 and 1969. The anomaly is along a pre-existing road and may be associated with road widening activities. By 1982, the area had become reforested. The 1994 photographs show the area as clear again (anomaly of potential concern 210).
164	668359.84278	1165507.27459	1969	This area was cleared between 1961 and 1969. The anomaly is along a pre-existing road and may be associated with road widening activities. By 1982, the area had become reforested.
166	668353.36083	1165440.68733	1969	This area was cleared between 1961 and 1969. The anomaly is along a pre-existing road and may be associated with road widening activities. By 1982, the area had become reforested.
170	668136.11140	1165106.68128	1969	A new trail is evident in the 1969 photographs. The trail runs north-south through almost all of the study area. The trail is evident in the 1982 photographs and most of the trail is present in the 1994 photographs.
171	668372.66464	1165312.10910	1969	Trees were cleared in this area between 1961 and 1969. This anomalous area is beside an area that remained clear for many years (anomaly of potential concern 119). By 1982, vegetation regrowth was underway.
172	668356.47942	1165293.43384	1969	This area was cleared between 1961 and 1969. This area is beside an area that remained clear for many years (anomaly of potential concern 119). By 1982, vegetation regrowth was underway.
175	668349.00932	1165134.07166	1969	This new trail is evident in the 1969 photographs. The trail is no longer evident in the 1982 photographs.
176	668456.08078	1165134.07166	1969	This new trail is evident in the 1969 photographs. The trail is no longer evident in the 1982 photographs.
185	668376.38251	1164529.38661	1969	A new trail is evident in the 1969 photographs. The trail runs east-west across a portion of the study area. The trail is evident in the 1982 photographs. By 1994, the trail is no longer evident.
192	668463.01903	1165578.13631	1982	Trees were cleared in this area between 1969 and 1982. By 1994, reforestation was evident.
196	668641.26801	1165543.30605	1982	Trees were cleared in this area prior to the acquisition of the 1982 photographs. By 1994, the southern portion of this anomaly had become reforested and revegetation was underway in the northern portion.
197	668552.14352	1165468.52344	1982	Trees were cleared in this area prior to the acquisition of the 1982 photographs. Tree clearing in this area may have been related to activities associated with the Dog Kennel Area. By 1994, the re-vegetation of the area was underway.

Anomaly #	Alabama State Plane Coordinates (approximate anomaly center)		Year of Change	Discussion
	X-Coordinate	Y-Coordinate		
198	668492.72720	1165444.96179	1982	This area was cleared between 1969 and 1982. The area was cleared of all vegetation. This area remains cleared in the 1994 photographs and most of the cleared area is within the Dog Kennel Area. This area may contain a concrete pad.
200	668487.60510	1165378.37453	1982	Trees were cleared in this area between 1969 and 1982. By 1994, reforestation of the area was underway.
203	668586.25282	1165567.55062	1994	Trees were cleared in this area between 1982 and 1994.
204	668622.47105	1165570.28407	1994	Trees were cleared in this area between 1982 and 1994.
207	668577.36911	1165454.79576	1994	Trees were cleared in this area between 1982 and 1994.
208	668374.41037	1165550.46655	1994	Trees were cleared in this area between 1982 and 1994.
209	668377.14383	1165538.16602	1994	This area was cleared Trees were cleared in this area between 1982 and 1994.. This clearing may be related to road widening activities.
210	668368.94347	1165525.18213	1994	This area was first cleared between 1961 and 1969 (see anomaly of potential concern 163). By 1982, the area had become reforested. The 1994 photographs show the area clear again. This anomaly is the same location as anomaly 163. Anomaly 210 does not appear on Figure 4.

Fig. 4